IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS & INTERFERENCES

In re Application of: OK-HYUN SON

Appeal Nº _____

Original Patent Nº 5,963,387 issued on 5 October 1999

Serial No.:	09/971,081	Examiner:	WONG, KIN C.
Filed:	5th of October 2001	Art Unit:	2627

For: METHOD FOR FORMING AND PROCESSING DATA ADDRESS MARK FOR HARD DISK DRIVE

REPLY BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
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Sir:

Pursuant to 37 C.F.R. §41.41(a), Appellant hereby requests entry of this Reply Brief in response to the Examiner's Answer mailed on 8 August 2007.

This Reply Brief is filed with a written Request for An Oral Hearing before the Board of Patent Appeals and Interferences and the statutory fee incurred by that request.

Folio: P54757RE2
Date: 10/9/7
I.D.: REB/kf

REMARKS

In the *Examiner's Answer* mailed on 8 August 2007, the Examiner has newly formulated the written description under the first paragraph of 35 U.S.C. §112.

VI. GROUNDS OF REJECTION ALTERED IN THE *EXAMINER'S ANSWER*

Claim Rejection Under 35 U.S.C. §112

A. Claims 32-34 and 50-52 are rejected under the first paragraph of 35 U.S.C. §112 as failing to comply with the *written description* clause.

The Examiner contends that the claims contain the limitation "a controller regulating movement of said head based on at least one of said first data address mark and said second data address mark" which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor, at the time the application was filed, had possession of the claimed invention.

VII. ARGUMENT

A. Rejection of claims 32-34 and 50-52 Under the *Written Description* Clause of the First Paragraph of 35 U.S.C. §112

Claims 32 through 34 and 50 through 52 are finally rejected under the first paragraph of 35 U.S.C. §112 as failing to comply with the written description requirement. Specifically, the Examining staff contends that the specification fails to describe "a controller regulating movement of said head based on at least one of said first data address mark and said second data address mark." This rejection is unfounded, is improper and should be withdrawn.

4. The Examining Staff Has Stepped Outside Of The Requirements Of The First Paragraph Of The First Paragraph Of 35 U.S.C. §112 In Endeavoring To Justify An Assertion Of A Lack Of Written Description

Specifically, the newly assigned Examiner alters the rationale originally given by the Final Office action, and now asserts that the specification contains no disclosure of,

> "regulating movement of said head based on one of the data address marks as claimed." [1]

Appellant's specification complies with 37 CFR §1.75(d)(1),

> "the terms and phrases used in the claims must find clear support **or** antecedent basis in the description so that the meaning of the terms in the claims may be ascertained by reference to the description."

Here, the Examining staff cites Appellant's column 4, lines 5 through 11, column 4, lines 26 through 30 and 34 through 37, column 4, lines 12 through 21, and column 5, lines 21 through 43, all of which are devoted to the servo information which may be stored in the servo sector of a disk. Appellant's specification expressly states that,

> "The DDC 28 is controlled by the micro-controller 14 ***to record the data received*** from a host computer via the read/write channel circuit 10 and the preamplifier 8 or ***to transmit the data read*** out from the disk 2 to the host computer."[2]

The specification further explains that:

> "Micro-controller 14 controls the DDC 28 according to a command received from the host computer to search a track and position of the transducer head. In doing so, the micro-controller 14 uses the track number and the PES input from the track information detector 13 and the A/D converter 12, respectively. The D/A converter 16 is connected to the micro-controller 14 for converting the digital signal output from the micro-controller 14

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[1] A paraphrase newly set forth in the unnumbered *Examiner's Answer* of Claim 32, lines 5 and 6; claim 50, lines 5 and 6; claim 51, lines 4 and 5; and claim 52, lines 5 and 6.

[2] Son' 387, column 5, lines 29-37.

> into an analog signal **for controlling the position of the transducer heads 4.** A VCM driver 18 generates a driving current for driving a VCM 20 according to the analog signal input from the D/A converter 16. The VCM 20 drives the transducer heads 4 to move in a radial direction of the disk 2 corresponding to the level of the driving current input from the VCM driver 18."[3]

Appellant's original specification states that,

> "[t]he two ***data address marks*** are respectively distinguished by using different patterns, and is discriminated by the micro-controller 14." [4]

With a data field, such as may be used with controller 14, as is explained in Appellant's original specification with a headerless servo recording system, where the:

> "***data address mark*** **informs** that the data is started and provides necessary synchronization when the **magnetic disk driving apparatus reads the *data***. ... if there is occurrence of a defect in the data address mark area, it is difficult if not impossible to restroe the damaged data address mark. As a result, since the data address mark is not detected, data positioned at the data area following the data address cannot be normally accessed." [5]

The specification further explains that:

> "Micro-controller 14 controls the DDC 28 ... to search a track and ***position*** **of the transducer head.** In doing so, the micro-controller 14 uses the track number and the **PES input from the track information detector 13** *and* the **A/D converter 12,** respectively. The **D/A converter 16** is connected to the micro-controller 14 for converting the digital signal output from the micro-controller 14 into an analog signal **for controlling the *position*** **of the transducer heads 4.** ... VCM 20 drives the

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[3] Son' 387, column 5, lines 38-51.

[4] Son '387, column 5, lines 64-67.

[5] Son '387, column 4, lines 35-51.

transducer heads 4 ***to move in a radial direction*** ... ."[6]

Recalling again that Appellant's original specification states that the:

> "data address mark informs that the data is started and provides **necessary synchronization when the magnetic disk driving apparatus reads the *data*."** [7]

In the *Examiner's Answer*, the Examiner staff continues to harp upon their assertion that "this application shows [*sic*, that] track number information is commonly obtained in the art from the servo information in servo sectors, not from the user data in data sectors. Even if it were obtained from the cylinder number mentioned above, that would still be from the ID field and not from the data field."

What the Examining staff has once again overlooked is that their foregoing explanation implicitly depends upon the *track number information* being the sole and exclusive source of information read from a disk which is used by controller 14 to position the heads; this assertion that *track number information* is the sole and exclusive source is technically inaccurate, and its technical inaccuracy is established by the foregoing statements in Applicant's original specification, namely Appellant's teaching that the:

> "data address mark informs that the data is started and provides ***necessary synchronization*** **when the magnetic disk driving apparatus reads the *data*."** [8]

Although this teaching was explained previously, the *Examiner's Answer* fails to address this teaching.

Accordingly, and once again Appellant explains that the original specification expressly teaches that the:

> "data address mark informs that the ***data is started*** and provides

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6 Son' 387, column 5, lines 38-51.

7 Son '387, column 4, lines 35-51.

8 Son '387, column 4, lines 35-51.

> ***necessary synchronization*** **when the magnetic disk driving apparatus reads the** ***data***." [9]

Although this teaching was explained previous

The specification further explains that:

> "Micro-controller 14 controls the DDC 28 ... to ***search a track*** and ***position*** **of the transducer head**. In doing so, ... micro-controller 14 uses the track number and the **PES input from the track information detector 13** *and* the **A/D converter 12** ... **for controlling the** ***position*** **of the transducer heads 4**. ... VCM 20 drives the transducer heads 4 ***to move in a radial direction*** ... ."[10]

Read literally, the *Examiner's Answer*'s statement that"

> "this application shows [*sic*, that] track number information is commonly obtained in the art from the servo information in servo sectors, not from the user data in data sectors. Even if it were obtained from the cylinder number mentioned above, that would still be from the ID field and not from the data field",

means that Appellant's *data address mark* is absolutely of no use to controller 14 during the control, or regulation, or in the positioning of transducer heads 4. This rigid exclusion is negated by Appellant's original teaching that the:

> "data address mark informs that the ***data is started*** and provides ***necessary synchronization*** **when the magnetic disk driving apparatus reads the data**", [11]

as well as Appellant's teaching that:

> "Micro-controller 14 controls the DDC 28 ... to ***search a track*** and ***position*** **of the transducer head**. In doing so, ... micro-controller 14 uses the ... the **PES input from the track information detector 13** *and* the **A/D converter 12** ... **for controlling the**

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[9] Son '387, column 4, lines 35-51.

[10] Son' 387, column 5, lines 38-51.

[11] Son '387, column 4, lines 35-51.

***position* of the transducer heads 4."**[12]

In short, controller 14 either uses such aspects of data read as synchronization provided by Appellant's "data address marks", or controller 14 does not. The specification however, expressly contradicts the assertions of the *Examiner's Answer*. Appellant's "controller regulating movement of said head" by the expedient of controlling movement and maintaining track alignment of the head "based on at least one of said first data address mark and said second data address mark" is described in writing and this description enables one of ordinary skill in the art to practice the invention defined by Appellant's claims.

Substantially, the Examining staff has stepped outside the bounds of the first paragraph of 35 U.S.C. §112 by refusing to read Appellant's specification in its entirety, and by compounding that refusal by failing to make a threshold determination of *the subject matter which the applicant regards as his invention* as is expressly required by 35 U.S.C. §112. It is only these failures which can sustain this rejection. Both of these failures are contrary to the express language of 35 U.S.C. §112.

In view of the failure of the *Examiner's Answer* to address these express teachings of the original specification, there is no basis which provides the substantial evidence required to sustain this rejection. The Board is therefore expressly urged to refuse to sustain this rejection.

D. Rejection of Claims 1-3, 6, 16, 17, 20, 21, 24, 26-28, 31, 32, 35-51 and 54 under 35 U.S.C. §102(e)

Claims 1 through 3, 6, 16, 17, 20, 21, 24, 26 through 28, 31, 32, 35 through 51 and 54 are finally rejected under 35 U.S.C. §102(e) as being anticipated by Malone Sr., U.S. Patent Nº 6,181,497. As was explained in Appellant's *Appeal Brief*, a thorough consideration of Malone '497 demonstrates that none of these claims are anticipated.

In support of this rejection, the Examiner contends that Figures 2A, 5A-8, and 10 of

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[12] Son' 387, column 5, lines 38-51.

Malone, Sr. '497 meet all the limitations of claims 1, 16, 20, 24, 26, 27, 31, 37, 40, 44, 46, 47, 49, and 54, and in Paper Nos. 20051109 and 20060328, sought to demonstrate that,

> "Malone, Sr. Figures 2A, 5A-8, and 10 meet all [of] the limitations of claims 1, 16, 20, 24, 26-27, 31, 40, 44, 46-47, 49, and 54. Figure 5A shows recording said data address mark to establish synchronization requested for reading user data in at least two different recording locations (14 and 62, where sync bytes correspond to the claimed data address marks as they indicate the location of the data along the track), and Figure 8 shows when one data address mark (14) is detected (92) to establish synchronization requested for reading user data (96), regarding said one mark as an effective mark of a corresponding data region, and skipping a remaining mark (62) when any one mark is normally detected (98), which comprises distinguishing between the two address marks. Figure 2A shows data blocks (34) preceding said servo information area (30)."

As explained in the *Appeal Brief*, beginning on page 48, this rationale for finding anticipation, fails to make a *prima facie* showing of anticipation under 35 U.S.C. §102(e) and is unsupported by the teachings of Malone U.S. Patent Nº 6.181.497 issued on the 30th of January 2001.

In the *Examiner's Answer*, the Examiner now urges that,

> "Figure 5A shows recording of said data address mark to establish synchronization requested for reading user data in at least two different recording locations (14 and 62, ..."

These are, substantially *ipsa verbis*, the same assertions repeatedly made during the prolonged examination of this application. This assertion ignores the express teachings of Malone '497 which requires that a "redundant sync byte field":

> As noted previously, the primary objective of the invention is to provide a data block format that provides a *redundant sync byte field* ***sufficiently spaced*** *from the primary sync byte field to* assure the readability of data despite the occurrence of disk defects spanning multiple bytes. Remarks of an Amendment filed by

> Malone '497, page 17, lines 8-12.[13]

Even ignoring *arguendo* the critical distinctions between the contents of a synchronization byte field and its sync address marks taught by the Malone '497 and related patent references, and Appellant's *data address marks*, the requirement taught by Malone '497 and the related patents for sufficient spacing between the primary and redundant fields can not be ignored in any consideration of anticipation under 35 U.S.C. §102(e). Under current U.S. practice,

> "[t]he examiner then compares the construed claims to the asserted anticipating reference, to determine whether ***each and every limitation*** *is found either expressly or inherently in [that] single prior art reference.*"[14]

This consideration is remarkable in its absence here. Accordingly, this rejection is improper, and may not be sustained under 35 U.S.C. §102(e). Such action is respectfully urged.

E. Rejection of Claims 16 Through 54 Under 35 U.S.C. §251

North American Container, Inc. v. Plastipak Packaging, Inc., et alii, 415 F.3d 1335 (Fed. Cir. 2005) explains that "applicant's own statement in the prosecution history" where the applicant argued that "[t]he independent claims ... have been amended to refer to the convex nature of the inner wall portions of the central re-entrant portion" was found to confirm the reissue applicant's earlier disclaimer. Nothing in *North American Container* negates the standard of evidence and the mode of analysis recommended by the Board in *In re Eggert, et al.* As explained in Appellant's *Appeal Brief*, here the Examining staff is arguing for a *per se*

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[13] Malone '497, Patent Nº 6.181.497, Serial Nº 08/570.878, Amendment filed on the 25th of January 1999, pages 2 through 4.

[14] *In re Jed Margolin*, ___ F.3d ____ (Fed. Cir. 15th June 2007), citing *In re Crish*, 393 F.3d 1253, 1256 (Fed. Cir. 2004), quoting *Celeritas Techs. Ltd. V. Rockwell Int'l Corp.*, 150 F.3d 1354, 1360 (Fed. Cir. 1998).

rule of reissue recapture. There is no evidence of record that the area within the concentric circles between the allowed dependent claims in Appellant's patent application and the rejected claims, was unpatentable. Consequently, there is no evidence in the prosecution history of disclaimer, and no evidence here of reissue recapture. Accordingly, this rejection may not be sustained.

CONCLUSION

First Paragraph of 35 U.S.C. §112

On the twin issues of enablement, namely the existence of a written description and a teaching of how to make and use Appellant's invention, it suffices to observe that in is recognized in the art that the disk drive continuously regulates movement of the heads and the disk. In short, any control of the activity of the head for any purpose described in the application satisfies both the *written description* clause and the *enablement* clause of 35 U.S.C. §112.

Here, the Examining staff has given absolutely no effect to Applicant's teachings that: the:

> "data address mark informs that the ***data is started*** and provides ***necessary synchronization*** **when the magnetic disk driving apparatus reads the data**", [15]

as well as Appellant's teaching that:

> "Micro-controller 14 controls the DDC 28 ... to ***search a track*** and ***position*** **of the transducer head**. In doing so, ... micro-controller 14 uses the ... the **PES input from the track information detector 13** *and* the **A/D converter 12** ... **for controlling the *position* of the transducer heads 4.**"[16]

In short, controller 14 either uses such aspects of data read as synchronization provided by Appellant's "data address marks", or controller 14 does not. Applicant's original specification expressly contradicts the assertions of the *Examiner's Answer*. Absent its acquisition of the synchronization provided by Appellant's "data address marks", the controller must continue to endeavor to control the position of the head while *seeking* at least one of those *data address marks*.

Moreover, the *Examiner's Answer* implausibly ignores the fact that a disk drive device

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[15] Son '387, column 4, lines 35-51.

[16] Son' 387, column 5, lines 38-51.

as taught by Appellant's specification must have a controller constructed so as to base its regulation of the head on at least one of the data address marks as is defined by claims 32, 50, 51 and 52. The fact that one of Appellant's data address marks has been either read or not read, provides no factual basis for the Examining staff to rule that **no** step of "regulating movement of said head" is taught as subsequently occurring, or that an subsequent step of "regulating movement of said head" excludes considerations by the controller of operational parameters other than Appellant's first and second data address marks. Such an absolute assertion is negated by Applicant's original specification; consequently, this rejection may not be maintained and the record before the Board therefore demonstrates that both the *written description* clause and the *enablement* clause have been met by Appellant's application.

It may be seen from the litany of excerpts from the "description" set forth in Appellant's originally filed application and repeated in Appellant's *Appeal Brief* beginning on page 25,[17] that not only has the Examining staff failed to identify any term or any phrase as lacking either "clear support" or lacking "antecedent basis" in Appellant's original specification, but that the original specification fully complies with the *written description* requirement of the first paragraph of 35 U.S.C. §112, as evidenced by Appellant's compliance with 37 CFR §1.75(d)(1), by describing a structure that regulates movement of one, or more heads, and a structure that regulates movement of one, or more heads based upon one or more of the first data address mark and the second data address mark, provides both "clear support" **and** "antecedent basis" for both of the elements introduced by this paragraph of the claims and for the relationship that exists between these elements because absent regulation of the movement based upon the first data address mark and the second data address mark, reading of data sought by the host computer is problematical, as is explained by Appellant's original specification.

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[17] And not repeated here in acquiescence to admonitions from the Board to reduce the size of the *Reply Briefs*.

Rejection Under 35 U.S.C. §102(e)

Anticipation under 35 U.S.C. §102(e), under current U.S. practice is demonstrated when,

> "[t]he examiner then compares the construed claims to the asserted anticipating reference, to determine whether ***each and every limitation*** *is found either expressly or inherently in [that] single prior art reference.*"[18]

The mere assertion of anticipation here depends upon the unwillingness of the Examining staff to give credence to the express teaching of the Malone '497 and the related IBM patent references, about the orientation of their "redundant sync byte field":

> As noted previously, the primary objective of the invention is to provide a data block format that provides a *redundant sync byte field* ***sufficiently spaced*** *from the primary sync byte field to* assure the readability of data despite the occurrence of disk defects spanning multiple bytes. Remarks of an Amendment filed by Malone '497, page 17, lines 8-12.[19]

This conclusion of anticipation is unsupported by substantial evidence of record, and is contrary to current U.S. practice, and may not be sustained under 35 U.S.C. §102(e). Such action is respectfully urged.

Reissue Recapture Under 35 U.S.C. §251

The *Examiner's Answer* fails to address the deficiencies in the final rejection noted in Appellant's *Appeal Brief*, and fails to conform the final rejection to the mode of analysis carefully laid out by the Board in its guidance written in *In re Eggert, et al.*, 67 USPQ2d 1717 (BAPI 2003). Nothing in *North American Container, Inc. v. Plastipak Packaging, Inc., et alii*, 415 F.3d 1335 (Fed. Cir. 2005) negates the standard of evidence and the mode of analysis

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[18] *In re Jed Margolin*, ___ F.3d ____ (Fed. Cir. 15th June 2007), citing *In re Crish*, 393 F.3d 1253, 1256 (Fed. Cir. 2004), quoting *Celeritas Techs. Ltd. V. Rockwell Int'l Corp.*, 150 F.3d 1354, 1360 (Fed. Cir. 1998).

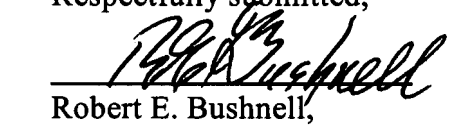
[19] Malone '497, Patent Nº 6.181.497, Serial Nº 08/570.878, Amendment filed on the 25th of January 1999, pages 2 through 4.

recommended by the Board in *In re Eggert, et al.* Absent the showing of recapture suggested by the Board in *In re Eggert, et al.*, this rejection should not be sustained.

In view of the law and facts stated in Appellant's *Appeal Brief* and in the foregoing remarks herein as well as all the foregoing reasons, Appellant believes that the rejections are improper and respectfully requests that the Board refuse to sustain the outstanding rejections of claims 1 through 54.

A Request for Oral Hearing and an Appellants' check in the amount of $1,030.00 drawn to the order of Commissioner accompany this Reply Brief. Should the Request and/or check become lost, the Commissioner is kindly requested to treat this paragraph as such a request, and is authorized to charge Deposit Account No. 02-4943 of Applicants' undersigned attorney in the amount of such fee.

Respectfully submitted,



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VIII. CLAIMS APPENDIX

Claims 1-54

1. A method for forming and processing a data address mark positioned in a data track of a magnetic disk preceding a data region in a disk drive to establish synchronization requested for reading user data from the magnetic disk, said method comprising the steps of:

recording of said data address mark in at least two different recording locations of said data track;

when one data address mark recorded in said different recording locations of said data track is normally detected to establish synchronization requested for reading user data from the magnetic disk, regarding said one data address mark as an effective data address mark of a corresponding data region; and

skipping a remaining data address mark recorded in said different recording locations of said data track, when any one data address mark recorded in said different recording locations is normally detected.

2. The method of claim 1, said at least two different recording locations corresponding to at least a first location and a separately located second location, said data address mark recorded in said first location being in accordance with a first pattern, and said data address mark recorded in said second location being in accordance with a second pattern different from said first pattern.

3. (Amended) The method of claim 2, further comprised of each [of] said data address mark recorded in said different recording locations of said data track being constructed of one byte of information.

4. (Amended) The method of claim 3, further comprised of bits constructing said one

byte being utilized for recording said data address mark and for counting the number of a byte of said remaining data address mark.

5. The method of claim 4, further comprised of said data address mark being detected by a controller of said disk drive performing a masking function with respect to said data address mark.

6. The method of claim 1, further comprised of said data address mark being detected by a controller of said disk drive performing a masking function with respect to said data address mark.

7. (Amended) A method for forming and processing a data sector comprising an identification field and a data field in a magnetic disk of a headerless servo recording system, comprising the steps of:

recording a data address mark, during a recording mode, in at least two different locations of said data field immediately preceding a data area containing user data;

detecting said data address mark recorded in said different locations of said data field, during a reading mode, to confirm validity of user data contained in said data area following said data address mark;

when said data address mark recorded in at least one of said different locations of said data field is detected, regarding said [one] data address mark detected as an effective data address mark of a corresponding data area for confirming the validity of user data contained therein; and

skipping a remaining data address mark recorded in said different recording locations of said data track, when said data address mark recorded in said at least one of said different recording locations is detected.

8. The method of claim 7, said at least two different locations corresponding to at least a first location and a separately located second location, said data address mark recorded in said first location being in accordance with a first pattern and said data address mark recorded in said second location being in accordance with a second pattern different from said first pattern.

9. (Amended) The method of claim 7, further comprised of each [of] said data address mark recorded in said different recording locations of said data field being constructed of one byte of information.

10. The method of claim 7, further comprised of said identification field comprising an identification preamble, an identification address mark, an identification area for providing said identification information, a cyclic redundancy code, and an identification postamble.

11. A disk drive, comprising:

a data recording disk having a plurality of concentric tracks, each track having servo sectors in which servo information for use in positioning a transducer head is written and succeeding data sectors, each data sector including:

an identification region in which identification information for use to identify the data sector for reading and writing operations is written; at least two different data address mark regions for use to indicate a validity of data recorded on said data sector is written;

a data region in which data transferred from an external communication device is written; and

an error correction code region in which an error correction code for use to automatically correct an error is written;

said transducer head for writing data to and reading data from the data sectors of the data recording disk, and for reading servo position information from the servo sectors of the

data recording disk;

means attached to the transducer head for positioning the head across the tracks to perform said read and write operations; and

said transducer head not utilizing a remaining data address mark recorded in said different recording locations of said data track, when a data address mark recorded in said two different data address regions is detected.

12. The disk drive of claim 11, further comprised of said transducer head detecting data address marks recorded in at least two different data address mark regions of said data field, during said reading mode, to confirm validity of user data contained in said data area following said data address mark, and when at least one data address mark recorded in said two different data address mark regions of said data field is detected, regarding said one data address mark as an effective data address mark of a corresponding data area for confirming the validity of user data contained therein.

13. The disk drive of claim 12, said at least two different data address mark regions of said data field corresponding to at least a first region and a separately located second region, said data address mark recorded in said first region being in accordance with a first pattern and said data address mark recorded in said second region being in accordance with a second pattern different from said first pattern.

14. The disk drive of claim 11, further comprised of each data address mark recorded in said two different data address mark regions of said data field being constructed of one byte of information.

15. The disk drive of claim 11, further comprised of said identification field comprising an identification preamble, an identification address mark, an identification area for providing

said identification information, a cyclic redundancy code, and an identification postamble.

16. A method of providing a data block preceding a servo information area in a magnetic recording medium for accessing user data therefrom, comprising:

writing a first data address mark in said data block; and

writing a second data address mark in said data block at a location preceding said servo information area.

17. The method of providing said data block in accordance with claim 16, wherein said step of writing said first data address mark comprises:

writing a first plurality of bits of a first bit pattern; and

wherein said step of writing said second data address mark comprises:

writing a second plurality of bits of a second bit pattern different from said first bit pattern.

18. The method of providing said data block in accordance with claim 17, wherein:

at least one bit of said first plurality of bits represents a first byte count signifying a first number of bytes to be ignored when said first data address mark is normally read.

19. The method of providing said data block in accordance with claim 18, wherein:

at least one bit of said second plurality of bits represents a second byte count signifying a second number of bytes to be ignored when said second data address mark is normally read.

20. A magnetic recording medium having a data track having one or more data blocks preceding a servo information area, comprising:

a first data address mark located before said servo information area in a first data block; and

a second data address mark located before said servo information area in said first data block.

21. The magnetic recording medium according to claim 20, wherein:

said first data address mark comprises a first plurality of bits of a first bit pattern; and

said second data address mark comprises a second plurality of bits of a second bit pattern different from said first bit pattern.

22. The magnetic recording medium according to claim 21, further comprised of:

at least one bit of said first plurality of bits being a first byte count signifying a first number of bytes to be ignored when said first data address mark is normally read.

23. The magnetic recording medium in accordance with claim 22, wherein:

at least one bit of said second plurality of bits represents a second byte count signifying a second number of bytes to be ignored when said second data address mark is normally read.

24. A disk drive device, comprising:

a magnetic recording medium having at least one data block that includes at least a first data address mark and a second data address mark having no servo information area therebetween; and

a controller configured to read within said at least one data block at least one of said first data address mark and said second data address mark.

25. The disk drive device according to claim 24, wherein:

said controller is further configured to read a predetermined number of bits from a successfully read one of said at least first data address mark and said second data address mark, and to determine a number of bytes to be ignored based on said predetermined number of bits.

26. A method for reading a data block preceding a servo information area of a memory disk, said method comprising the steps of reading at least one of a plurality of data address marks recorded on said data block at a location before said servo information area.

27. The method of claim 26, further comprised of skipping detection of other ones of said at least two data address marks from subsequent ones of said different recording locations.

28. The method of claim 26, wherein recording of said at least two data address marks comprises:

recording a first data address mark at a first one of said plurality of different locations, said first data address mark comprising a first plurality of bits of a first bit pattern; and

recording a second data address mark at a second one of said plurality of different locations, said second data address mark comprising a second plurality of bits of a second bit pattern from said first bit pattern.

29. The method of claim 28, wherein:

at least one bit of said first plurality of bits being a first byte count signifying a number of bytes to be ignored when said first data address mark is normally read at said first one of said plurality of different locations.

30. The method of providing said data block in accordance with claim 29, wherein:

at least one bit of said second plurality of bits represents a second byte count signifying a second number of bytes to be ignored when said second data address mark is normally read.

31. A method for preparing a memory disk, comprising:

recording a data address mark providing synchronization that enables reading of data

from the memory disk, along a data track on the memory disk at a first location on a first data block preceding a servo information area; and

recording said data address mark at a second location on said first data block preceding said servo information area.

32. A disk drive device, comprising:

a head positioned to read, within at least one of a plurality of data blocks of a recording medium, a first data address mark, and a second data address mark, said first data address mark and said second data address mark having no servo information therebetween; and

a controller regulating movement of said head based on at least one of said first data address mark and said second data address mark.

33. The device of claim 32, wherein:

said head reading within said first data address mark, an indication of a number of bytes to be ignored within said data block subsequent to successfully reading of said first data address mark.

34. The device of claim 32, wherein:

said controller is further configured to read a predetermined number of bits from a successfully read one of said first data address mark and said second data address mark, and to determine a number of bytes to be ignored based on said predetermined number of bits.

35. A method of providing a data block preceding a servo information area in a magnetic recording medium for accessing user data therefrom, comprising:

writing a first data address mark in said data block; and

writing in said data block at a location preceding said servo information area, a second data address mark that is distinguishable from said first data address mark.

36. A method of providing a data block preceding a servo information area in a magnetic recording medium for accessing user data therefrom, comprising:

writing a first data address mark in said data block; and

writing a second data address mark exhibiting a different bit pattern in said data block at a location preceding said servo information area.

37. A method of providing a data block preceding a servo information area in a magnetic recording medium for accessing user data therefrom, comprising:

writing in said data block a first data address mark marking said data block; and

writing in said data block at a location preceding said servo information area, a second data address mark separately marking said data block.

38. A magnetic recording medium having a data track having one or more data blocks preceding a servo information area, comprising:

a first data address mark located before said servo information area in a first data block; and

a second data address mark distinguishable from said first data address mark, located before said servo information area in said first data block.

39. A magnetic recording medium having a data track having one or more data blocks preceding a servo information area, comprising:

a first data address mark located before said servo information area in a first data block; and

a second data address mark exhibiting a different bit pattern, located before said servo information area in said first data block.

40. A magnetic recording medium having a data track having one or more data blocks preceding a servo information area, comprising:

a first data address mark located before said servo information area in a first data block; and

a second data address mark separately marking said data block, located before said servo information area in said first data block.

41. A disk drive device, comprising:

a magnetic recording medium having at least one data block that includes at least a first data address mark and a second data address mark distinguishable from said first data address mark and having no servo information area between said first data address mark and said second data address mark; and

a controller configured to distinguish within said at least one data block, between said first data address mark and said second data address mark.

42. A disk drive device, comprising:

a magnetic recording medium having at least one data block that includes at least a first data address mark and a second data address mark exhibiting a different bit pattern, with no servo information area between said first data address mark and said second data address mark; and

a controller configured to read within said at least one data block at least one of said first data address mark and said second data address mark.

43. A disk drive device, comprising:

a magnetic recording medium having at least one data block that includes at least a first data address mark and a second data address mark separately marking said data block, with no servo information area between said first data address mark and said second data address mark;

and

a controller configured to read within said at least one data block at least one of said first data address mark and said second data address mark.

44. A method for reading a data block preceding a servo information area of a memory disk, said method comprising the steps of reading at least one of a plurality of data address marks that are mutually distinguishably on the memory disk at a location before said servo information area.

45. A method for reading a data block preceding a servo information area of a memory disk, said method comprising the steps of reading at least one of a plurality of data address marks exhibiting different bit patterns on the memory disk at a location before said servo information area.

46. A method for reading a data block preceding a servo information area of a memory disk, said method comprising the steps of reading at least one of a plurality of data address marks that separately mark said data block on the memory disk at a location before said servo information area.

47. A method for preparing a memory disk, comprising;

recording a first data address mark providing synchronization that enables reading of data from the memory disk, along a data track on the memory disk at a first location on a first data block preceding a servo information area; and

recording a second data address mark that is distinguishable from said first data address mark at a second location on said first data block preceding said servo information area.

48. A method for preparing a memory disk, comprising;

recording a first data address mark providing synchronization that enables reading of data from the memory disk, along a data track on the memory disk at a first location on a first data block preceding a servo information area; and

recording a second data address mark exhibiting a different bit pattern, at a second location on said first data block preceding said servo information area.

49. A method for preparing a memory disk, comprising;

recording a data address mark providing synchronization that enables reading of data from the memory disk, along a data track on the memory disk at a first location on a first data block preceding a servo information area; and

recording said data address mark to separately mark said data block at a second location on said first data block preceding said servo information area.

50. A disk drive device, comprising:

a head positioned to read, within at least one data block of a recording medium, a first data address mark, and a second data address mark that is distinguishable from said first data address mark; and

a controller regulating movement of said head based on at least one of said first data address mark and said second data address mark.

51. A disk drive device, comprising:

a head positioned to read, within at least one data block of a recording medium, a first data address mark, and a second data address mark separately marking said data block; and

a controller regulating movement of said head based on at least one of said first data address mark and said second data address mark.

52. A disk drive device, comprising:

a head positioned to read, within at least one data block written in headerless servo recording format on a recording medium, a first data address mark, and a second data address mark separately marking said data block; and

a controller regulating movement of said head based on at least one of said first data address mark and said second data address mark.

53. A method of providing a data block recording medium for accessing user data therefrom, comprising:

writing within at least one data block written in a headerless servo recording format on said recording medium, a first data address mark marking said data block; and

writing in said data block, a second data address mark separately marking said data block.

54. A method of providing a data block in a recording medium for accessing user data therefrom, comprising:

writing in said data block a first data address mark marking said data block; and

writing in said data block a second data address mark separately marking said data block.

IX. EVIDENCE APPENDIX

1. U.S. Patent Nº 4,618,989 to Young, *et al.*, issued on 21 October 1986.[20]
2. U.S. Patent Nº 5,047,877 to Herting, Kenneth E., issued on 10 September 1991.[21]
3. U.S. Patent Nº 5,210,660 to Hetzler, Steven R., issued on 11 May 1993.[22]
4. U.S. Patent Nº 5,231,545 to Gold, Clifford M. issued on 27 July 1993.[23]
5. U.S. Patent Nº 5,347,207 to Otsuki, Tadashi issued on 13 September 1994.[24]
6. U.S. Patent Nº 5,379,160 to Otani, Kazuoki, issued on 3 January 1995.[25]
7. U.S. Patent Nº 5,384,671 to Fisher, Kevin D. issued on 24 January 1995.[26]
8. U.S. Patent Nº 5,420,730 to Moon, *et al.*, issued on 30 May 1995.[27]
9. U.S. Patent Nº 5,438,559 to Best, *et al.*, issued on 1 August 1995.[28]
10. U.S. Patent Nº 5,442,499 to Emori, Teruaki issued on 15 August 1995.[29]
11. U.S. Patent Nº 5,446,604 to Chiba, Takayoshi, issued on 29 August 1995.[30]

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[20] Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

[21] Cited in the fourth Office action (Paper Nº 20050510) dated 5/18/2005.

[22] Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

[23] Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

[24] Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

[25] Cited in the fourth Office action (Paper Nº 20050510) dated 5/18/2005.

[26] Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

[27] Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

[28] Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

[29] Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

[30] Cited in the fourth Office action (Paper Nº 20050510) dated 5/18/2005.

12. U.S. Patent Nº 5,475,540 to Gold, Clifford M., issued on 12 December 1995.[31]
13. U.S. Patent Nº 5,517,631 to Machado, *et al.*, issued on 14 May 1996.[32]
14. U.S. Patent Nº 5,523,903 to Hetzler, *et al.*, issued on 4 June 1996.[33]
15. U.S. Patent Nº 5,544,135 to Akin, *et al.*, issued on 6 August 1996.[34]
16. U.S. Patent No.5,581,418 to Hasebe, Masahiro, issued on 3 December 1996.[35]
17. U.S. Patent Nº 5,477,103 to Romano, *et al.*, issued on 19 December 1996.[36]
18. U.S. Patent Nº 5,589,998 to Yu, Mantle M., issued on 31 December 1196.[37]
19. U.S. Patent Nº 5,627,693 to Hirukawa, Takashi, issued on 6 May 1997.[38]
20. U.S. Patent Nº 5,627,695 to Prins, *et al.*, issued on 6 May 1997.[39]
21. U.S. Patent Nº 5,631,783 to Park, Jung-il, issued on 20May 1997.[40]
22. U.S. Patent Nº 5,696,745 to Yamawaki, Masashi, issued on 9 December 1997.[41]
23. U.S. Patent Nº 5,742,582 to Suzuki, Katsuji, issued on 21 April 1998.[42]

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39 Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

40 Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

41 Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

42 Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

24. U.S. Patent Nº 5,825,569 to Kim, *et al.*, issued on 20 October 1998.[43]

25. U.S. Patent Nº 5,844,920 to Zook, *et al.*, issued on 1 December 1998.[44]

26. U.S. Patent Nº 6,181,497 to Malone, Sr., Daniel James, issued on 30 January 2001.[45]

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[43] Cited in the first Office action (Paper Nº 5) dated 5/30/2002.

[44] Cited in the fourth Office action (Paper Nº 20050510) dated 5/18/2005.

[45] Cited in the fourth Office action (Paper Nº 20050510) dated 5/18/2005.

X. RELATED PROCEEDINGS APPENDIX

None.